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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/637,063	08/11/2000	Yury Shapiro	07066-056001	8724

22434 7590 09/21/2004

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EXAMINER

HO, TUAN V

ART UNIT	PAPER NUMBER
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2615

DATE MAILED: 09/21/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/637,063

Applicant(s)

SHAPIRO ET AL.

Examiner

Tuan V Ho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-20 and 22 is/are allowed.
- 6) ☒ Claim(s) 21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5, 8, 14.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

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1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 21 is rejected under 35 U.S.C. 102(b) as being anticipated by Kato et al cited by Applicants (US 4,924,085).

Kato et al discloses in Fig. 10, an electronic finger print that comprises the device for creating an image of a fingerprint pattern on an image sensor (fingerprint device shown in Fig. 10 creates a fingerprint image on an image sensor 12, col. 7, lines 39-68), optical plate (optical plate 7 comprises surface 7-2 to which a finger is pressed to create a finger pattern as shown in Fig. 10), reflector (mirror 24 or surface 7-1, col. 7, line 42), illuminating tool (light source A), an imaging lens (CCD image sensor 12 is located at a distance from the optical plate 7, col. 7, line 61), aperture stop (aperture stop 15a defines an aperture light beam of reflected image light rays from mirror

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24, col. 7, line 46), housing shaped to hold electronic components for operation of the electronic apparatus and shaped to retain the device (optical magnetic shield box 30 holds image sensor 12 and is shaped to accommodate the optical plate as shown in Fig. 10), and optical plate operates simultaneously as an indicator surface of the housing and as a finger field (optical plate 7 includes surface 7-2 that is used as an indicator surface and surface of the finger field).

3. Claims 1-2 and 22 are allowed.

The prior art of record fails to suggest or disclose:

With regard to claim 1, a device for creating an image of a fingerprint pattern on an image sensor, the device comprising:
an array of microreflectors covering part of the optical plate, the microreflectors being distributed along a base surface, the imaging lens including an aperture stop that defines an aperture light beam of the reflected imaging light rays forming the image of the fingerprint pattern; in which the microreflectors are inclined to the base surface so that an area of a projection of the microreflectors on the base surface taken along a path of the imaging light rays reflected at the surface of the microreflectors and passing through the aperture stop exceeds an area of a projection of the microreflectors on the

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base surface taken along a path of the reflected imaging light rays incident to the surface of the microreflectors.

With regard to claim 15, An electronic apparatus comprising: a device to create an image of a fingerprint pattern on an image sensor, the device comprising: an array of microreflectors covering part of the optical plate, the microreflectors being distributed along a base surface, the imaging lens including an aperture stop that defines an aperture light beam of the reflected imaging light rays forming the image of the fingerprint pattern; in which the microreflectors are inclined to the base surface so that an area of a projection of the microreflectors on the base surface taken along a path of the reflected imaging light rays and passing through the center of the aperture stop exceeds an area of a projection of the microreflectors on the base surface taken along a path of the imaging light rays incident to the surface of the microreflectors; and a housing shaped to hold electronic components for operation of the electronic apparatus and shaped to retain the device.

With regard to claim 18, a device for creating an image of a fingerprint pattern on an image sensor, the device comprising: an optical plate including: an array of microreflectors covering part of the optical plate, the microreflectors being distributed

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along a base surface, the imaging lens including an aperture stop that defines an aperture light beam of tile reflected imaging light rays forming the image of the fingerprint pattern; in which the microreflectors are inclined to the base surface so that an angle between the normal to the base surface and an imaging light ray incident to a microreflector is less than an angle between the normal to the base surface and that imaging light ray reflected from the microreflector.

With regard to claim 19, a device for creating an image of a fingerprint pattern on an image sensor, the device comprising an optical plate including: an array of microreflectors covering part of the optical plate, the microreflectors being distributed along a base surface and being shaped like V-shaped grooves, the imaging lens including an aperture stop that defines an aperture light beam of the reflected imaging light rays forming the image of the fingerprint pattern; wherein the side of the grooves facing the imaging lens receives and reflects the aperture light beam.

With regard to claim 20, an electronic apparatus comprising: an array of microreflectors covering part of the optical plate, the microreflectors being distributed along a base surface, the imaging lens including an aperture stop that defines an aperture light beam of the reflected imaging light

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rays forming the image of the fingerprint pattern; in which the microreflectors are inclined to the base surface so that an area of a projection of the microreflectors on the base surface taken along a path of the reflected imaging light rays and passing through the aperture stop exceeds an area of a projection of the microreflectors on the base surface taken along a path of the imaging light rays incident to the surface of the microreflectors; and a housing shaped to hold electronic components for operation of the electronic apparatus and shaped to retain the device; in which the optical plate operates simultaneously as an indicator surface of the housing and as a finger field.

With regard to claim 22, a device for creating an image of a fingerprint pattern on an image sensor, the device comprising: an optical plate including: an array of microreflectors covering part of the optical plate, the microreflectors being distributed along a base surface, and an imaging lens receiving the imaging light rays reflected from the array of microreflectors to create the fingerprint pattern image at a location external to the optical plate, the imaging lens including an aperture stop that defines an aperture light beam of the reflected imaging light rays forming the image of the fingerprint pattern; in which the microreflectors are inclined to the base surface so that a cross-

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section of image light rays incident to the microreflectors is discontinuously greater than a cross-section of the imaging light rays reflected from the microreflector.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Metz et al (cited by Applicants) discloses a topographical object detection system that includes a reflecting surface.

Keagy et al (cited by Applicants) discloses a fingerprint reader that includes embossed printing on the front side of a card.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUAN HO whose telephone number is (703) 305-4943. The examiner can normally be reached on Mon-Fri from 7AM to 4PM.

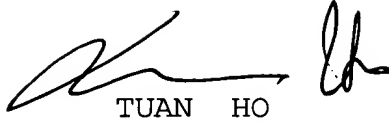
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Christensen, can be reached on (703) 308-9644. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

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TUAN HO

Primary Examiner

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